

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 11-070101

(43)Date of publication of application : 16.03.1999

(51)Int.Cl.

A61B 5/14
G01N 21/35

(21)Application number : 09-271709

(71)Applicant : MATSUSHITA ELECTRIC WORKS LTD

(22)Date of filing : 03.10.1997

(72)Inventor : MARUO KATSUHIKO
SHIMIZU KEISUKE
OKA MASAMI

(30)Priority

Priority number : 08314379 Priority date : 26.11.1996 Priority country : JP
09169267 25.06.1997

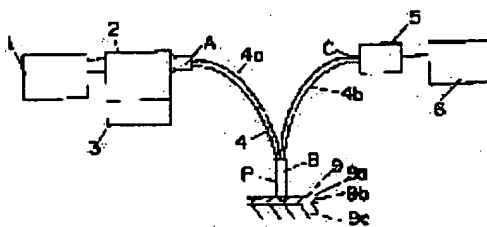
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(54) ANALYSIS METHOD FOR BLOOD COMPONENT DENSITY, DEVICE THEREFOR AND OPTICAL FIBER BUNDLE FOR THE DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To accurately perform the determination of a blood component density non-invasively by performing spectroscopic analysis by using near infrared light selectively transmitted through a cutis part in the surface layer tissue of a living body and performing quantitative analysis by using the correlation of the intra-blood component density and the density in the cutis part of a component for which the determination is a purpose.

SOLUTION: The spectroscopy of light from a halogen lamp 1 is performed in a diffraction grating unit 2 housing a diffraction grating, and in a stepping motor unit 3, the rotation angle of the diffraction grating is controlled and a spectroscopic wavelength is adjusted. This optical fiber bundle 4 transmits the light after the spectroscopy to an object to be measured and sends transmission light to a light receiving unit 5 and an arithmetic unit 6 performs the determination of a glucose density based on signals from the light receiving unit 5. An absorption spectrum belonging to a near infrared area is utilized for the glucose density determination and multivariate analysis is executed. The multivariate analysis uses a check base obtained by PLS regression analysis and an analytical curve is obtained by an experiment using an analysis device beforehand.

**LEGAL STATUS**

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the
examiner's decision of rejection or application-converted
registration]

[Date of final disposal for application]

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[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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(19) 日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開平11-70101

(43) 公開日 平成11年(1999) 3月16日

(51) Int.Cl.⁶
 A 61 B 5/14
 G 01 N 21/35

識別記号
 310

FI
 A 61 B 5/14
 G 01 N 21/35

310
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審査請求 未請求 請求項の数34 OL (全 18 頁)

(21) 出願番号 特願平9-271709

(22) 出願日 平成9年(1997)10月3日

(31) 優先権主張番号 特願平8-314379

(32) 優先日 平8(1996)11月26日

(33) 優先権主張国 日本 (J P)

(31) 優先権主張番号 特願平9-169267

(32) 優先日 平9(1997)6月25日

(33) 優先権主張国 日本 (J P)

(71) 出願人 000005832

松下電工株式会社

大阪府門真市大字門真1048番地

(72) 発明者 丸尾 勝彦

大阪府門真市大字門真1048番地松下電工株式会社内

(72) 発明者 清水 敬輔

大阪府門真市大字門真1048番地松下電工株式会社内

(72) 発明者 岡 雅美

大阪府門真市大字門真1048番地松下電工株式会社内

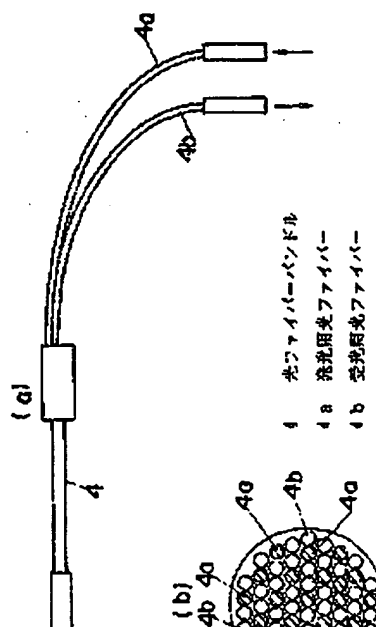
(74) 代理人 弁理士 西川 恵清 (外1名)

(54) 【発明の名称】 血液成分濃度の分析方法及びその装置と該装置用光ファイバーバンドル

(57) 【要約】

【課題】 グルコースといった血液成分濃度の定量を非侵襲で精度良く行う。

【解決手段】 生体の血液成分濃度を近赤外光の分光分析で行うにあたり、生体の表層組織における真皮部分を選択的に透過させた近赤外光あるいは真皮部分で選択的に拡散反射させた近赤外光を用いて分光分析を行い、定量を目的とする成分の血中成分濃度と上記真皮部分中の濃度との相関を利用して定量分析を行う。



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